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# VICK'S MAGAZINE.

Vol. 16.

ROCHESTER, N. Y., AUGUST, 1893.

No. 10.





THE GENTIANS.

G. crinita. G. Andrewsii.

Come, dear sweetheart, let us go-Where the blue-fringed Gentians grow, By the streamlet's tardy flow Scarce a flower now lifts its head 'Bove the crisp dun meadow's bed; All the fragrant roses dead.

Tiger lilies, daisies, all Heard and answered autumn's call, Softly letting leaflets fall. But this lovely flower remains To reward us for our pains, And to tell us autumn reigns.

Slender stems the blooms upbear, Decked with fringes far more rare Than did princess ever wear. On the bank the brook beside Other Gentians we've espied; But they all their faces hide.

Never sun at break of day, Nor the winds that sportive play, Tear those mystic veils away. On elysian fields of old Gentians did their robes unfold, Fairer than a cloth of gold.

Then there came a bitter day, With fierce armies in array; Hot and cruel was the fray. Many a hero, brave and true Did the earth with blood imbue, Turning red the fields of blue.

And the king whose name you beart Lost his kingdom then and there; Moans and wailings filled the air. Did you, on that fearful night, Witnessing the bloody fight, Veil your faces in affright?

But 'tis not for days of yore, Teeming with their dingy lore, That we praise you evermore. What the subtle charm or spell That holds our hearts we cannot tell; This we know, we love you well.

\* Closed Gentian.
† The Gentian derives its name from Gentius, King of Illyria.

## SOME CACTUS NOTES.

KNOW that to many of my readers the culture of cacti is as a sealed book. Twentyfive years ago I was visiting a friend in Lebanon, Ill., and she gave me a Mammillaria montana, a little bit of a prickly ball. I kept that cactus for fourteen years, and when I let it freeze it filled a large dishpan and rolled over the edge.

It was so large I did not know what to do with it-I would know better now. I have found out it was worth a good deal of money only I did not know where to go to sell it. My next variety was Cereus flagelliformis, and then phyllocactus and a common prickly pear, Opuntia vulgaris. One year I had fourteen varieties of cactus, and I thought they must be nearly all the kinds that grew, but about this time I visited the famous Shaw Garden in St. Louis and I had my eyes opened.

This collection was begun over thirty years ago when Dr. Engleman was presented with a rare plant by Prince Salm-Dyck of Austria. The doctor sent it to his friend Mr. Henry Shaw, and from that time the number of plants at the Garden have steadily increased year by year. Great increase has been made during the last two or three years, and Director William Trelease, during a recent tour of the West, was himself an important contributor to the collection. And so Shaw's Garden now has in its greenhouses examples of all the thirteen genera known to science, and of the one thousand species described by botanists more than one-third that number, besides many duplicates. A firm in this country advertises over seven hundred varieties.

By purchase, exchange and other ways I now have secured one hundred and thirty fine plants, all different, and some of them have given me lovely flowers the past summer.



AN ARIZONA CEREUS

The word cactus is Greek, kaktos, used by Theophrastus to describe a thorny plant. a native of America and but one member of the family is indigenous to the eastern hemisphere. Twenty-five species are natives of Texas, but the species are most numerous in New Mexico where sixty-five of them are found; fifty-five of these natives of Mexico.

A firm has been started at Lava, New Mexico, which sends out much larger plants for the same money than the eastern firms can do and also has native cactus plants which are not named in other catalogues.

While making a visit to Shaw's Garden lately, I was surprised at the large size of some of the cactus plants, Cereus colubrinus, a large specimen stands, I should judge, fifteen feet high—a magnificent plant.

Some species like Mammillaria micromeris are not much larger than a good sized button and look as if covered with lace, you can give them to the baby to handle without harm, while Echinocactus Saltillensis has spines often five inches long which the Indians used for pins. Echinocactus Wislizenii must have been a bonanza to the Indian, for with its hooked spines he caught the mountain trout and its strong straight ones were utilized as needles by his wife in making their clothing. Its juicy flesh he used for food, and its lemon-like fruit was considered a great

Echinocereus candicans. This is the plant

over which all lovers of cacti have given such exclamations of delight. It has been known and sold under several different and suggestive names, such as "Rainbow," "Lace" and "Golden Gem." The spines are exquisitely colored and lie flat to the plant in alternate rings in color of creamy white or richest red and brown. The most beautiful coloring of the spines is obtained by planting in sand or gravel containing a deposit of iron, or even placing some iron filings in the bottom of the pot will give the same result. The flowers, of which there are often fifteen on one plant not over six inches high, are of a beautiful purple blending into pink, three to five inches in diameter. Its ease of culture and hardiness may be imagined from the fact that after lying months out of the soil the plant takes new root and blooms the same season it is potted.

The mammillarias form a very interesting section. M. applanata bears pretty lemon colored flowers and long berry shaped bright red fruit, both at the same time in early spring, the fruit remaining on the plant for months.

The opuntias form a numerous family, many of them going under the name of "prickly pear" and "Indian fig." O. frutescens is a beautiful shrub-like plant very prolific in small greenish yellow flowers followed by a crop of large scar-let berries. O. lurida is known as the "tree" or "candle plant." It makes a large fine looking plant covered with hundreds of large rose purple flowers. Bright yellow seed pods follow the flowers and at some distance look not unlike the blaze of a candle. Some of the "prickly pears" grow to a height of twenty feet and in their native home have leaves as large as a. dinner plate. Pilocereus, or "old man tus, is a very strange looking plant, it looks like the back of an old man's head covered with white hair. There is also one called the "old woman" cactus.

The species of cereus are noted for their beautiful flowers, many of which bloom at night. Cereus flagelliformis is the well known "snake." cactus having bright rose colored flowers. Cereus giganteus grows sometimes to a height of fifty feet. The fig shaped edible fruit is much used, it is eaten fresh; the sap is boiled to a syrup known by the name *miel de saquarro*, and a flour is prepared of the cleaned and dried seeds. The flour is made into bread and into a chocolate-like drink called *atole*. The fruit is of great importance to the inhabitants of Sonora.

Cereus grandiflorus, or "queen of the night" is a creamy white; the blooms often measure three feet in circumference. It generally begins to open about eight o'clock in the evening and is very interesting to watch. Really you can see it move and expand-grow as it wereand when fully opened the perfume is delicious. The flowers will only remain open five or six hours. There are many varieties of the cereuswhich are grand.

The epiphyllums are fine winter bloomers, the common name is "lobster" or "crab They commence to bloom in Decem-

ber and bloom for two months.

Phyllocactus latifrons is the grandest blooming cactus. It is a rapid grower and will bloom the second season from a cutting. The long trumpet-shaped buds expanding after sunset into a large rosette of delicate white petals shaded outside in golden tints. P. Alexandrina has a deep scarlet flower; P. Cooperi, yellow; it is not an unusual sight to see plants of P. roseus superbus only a foot high with a couple of dozen flowers and buds on at one time, rose color; P. albus superbus is white; P. Ackermanni, sold as "king" cactus, has satiny scarlet flowers. One firm advertises seventy-five distinct phyllocactus, so if one has only this species he may have a great variety in form and color; but one will not be satisfied with these as there are so many other queer plants and good bloomers in the family.

MRS. M. A. BUCKNELL.

New Douglas, Ill.

## GINSENG CULTURE.

N the "Letter Box" of Vick's Magazine for February, 1893, is an item entltled "Ginseng," in which G. F. T., jr., of Annin Creek, Pa., asks how to propagate the seed of ginseng. Your answer, that the attempts to cultivate ginseng have never been successful, and that it thrives only in the conditions of its natural wild state, is in accordance with the general impression. Many efforts to cultivate this valuable root have proved failures owing to the fact that the parties making the experiment have been entirely unacquainted with the natural habits and requirements of the plant. The writer commenced experimenting with this plant in the autumn of 1886. My first year's experience was very unfavorable and the outlook was so discouraging that I abandoned it and pronounced it a failure, and did nothing at it in the season of 1887. But in 1888 my plants gave better promise of success. In October of that year I took up one bed which had been

set two years, seventy-five of the largest roots weighed three pounds, while one hundred wild roots weighed two pounds; these results, under unfavorable conditions, convinced me that the cultivation of ginseng could be made a success. I then commenced a careful study of the natural habits and requirements of the plant. The experience thus gained has enabled me to so improve upon my methods of culture that success is now an assured fact. In September 1890 I took up a bed which had been set four years, seventy-five roots weighed five and one half pounds, these were small roots when set requiring one hundred to three hundred to the pound.

The best way to get started in the business is to transplant the wild roots, in this way one soon gets to raising his own seed. Of course the seed is the main dependence in the culture of ginseng, as it does not spread from the root. But one must have the seed before he can sow it. Fresh reliable ginseng seed is expensive and always will be, it cannot be purchased in any considerable quantity, in fact it cannot be handled in bulk like other seeds, it must be sown in the autumn of the season in which it is grown, and must not be allowed to get dry.

It may be sown in any secluded place in the forest without any elaborate preparation of ground and left for nature and time to produce the crop of roots, but this method is slow. The next best plan is to properly prepare the ground, make it very rich and sow in drills two to three inches apart, seeds one inch apart and one inch deep. It requires eighteen months for the seed to germinate. After the roots are two or three years old they may be transplanted four to six inches apart each way. My own operations thus far have been in open garden. My plants the past season (1892) made a splendid showing and were the admiration of all who saw

them. My crop of seed was worth over \$100, the bulk of it produced upon ground aggregating three hundred feet in length by three feet wide. Indications are that the cultivation of ginseng can be made very profitable for those who have time and patience to devote to it.

The ginseng plant is a very interesting study. It is generally described as a fifteen-leaved plant. It is all the way from three to twenty-five-leaved according to age and vigor of root. I had upon my grounds the past season hundreds of twenty-leaved, a large number of twenty-five and a few thirty-leaved plants. The root is of slow growth and attains great age, often found thirty, forty, and even fifty years old.

The exportation of this root is an old established industry, dating back to the year 1718,

when it was first exported from



1882 to 1891, amounted to 3,888,206 pounds valued at \$7,773,996. The supply of the wild root is fast becoming exhausted in this country. It is certainly worth while to make an effort to establish the cultivation of so valuable a root while there is something left to start it with. But I would caution all who may undertake to raise the crop not to purchase ginseng seed out of season, and to avail themselves of all the information they may be able to obtain. At another time I shall endeavor to give more details of the cultivation and care of the crop and the curing of the roots, and their preparation and packing for market.

I will furnish during the coming season a free trial package of ginseng seed to such Educational Institutions as have botanical gardens, also to Agricultural Experiment Stations and Departments upon application before the first of September.

GEO. STANTON.

Summit Station, N. Y.

#### CANNAS AND EULALIA.

THE canna has for some years been one of the most popular plants cultivated for its vigorous growth and fine decorative foliage. The broad leaves and stately appearance of the plant will retain for it the same rate of popularity as regards the foliage, but the French florists have crowned the old favorite with the jewels of most magnificent blooms. Large broad gorgeously colored flowers, many in a cluster, freely produced on every shoot, the new cannas introduced by Crozy and known as the Crozy cannas demand all the encomiums that can be bestowed upon a flower that has attained fine development. Madame Crozy stands pre-eminent among them for grandeur of bloom; dazzling scarlet and the size of a fine gladiolus. The Star of '91 is unique and unlike any other, the color being an intense scarlet, rayed and bordered with dazzling golden vellow. Both varieties are magnificent conservatory bloomers and stately pot plants. They require good rich soil, plenty of water, and enjoy having the soil worked and kept loose. A heat above greenhouse temperature, or averaging 70° is suit-

For contrast with the fine Crozy cannas nothing is more striking than the Eulalia zebrina. The leaves are dark green with dull gold-colored bars running crosswise, different from every other grass or foliage plant in this respect. Eulalia zebrina grows rapidly from small divisions of the roots, and if planted in April or May, by June will be in a fine state of growth and continue to increase in size and beauty till after heavy frosts. The plants are hardy and will remain good for years.

It is a pleasure to watch the growth of this fine plant as one shoot after another comes forth and attains its fine proportions. The whole is as graceful as if it had been arranged for a vase by the hand of care. The stems are stiff and upright for a good height and then the blades become long and slender and curve all around in the most regular proportions. In the fall the tall tassel-like plumes are borne on upright stems arising from the center of the clump.

For sub-tropical beds no plants form a finer contrast, none are more vigorous in growth and none more easily propagated by divisions of roots and resetting than the Crozy cannas and Eulalia zebrina. A few plants of each, or a single specimen, no matter how fine, merely suggests what they are in quantities massed together. Fifty or more in a row or group is a sight to see and remember. The dazzling scarlet blooms of the cannas are produced on such quickly grown shoots in such rapid succession that at no time, from spring till late fall, is there a lack of bloom to contrast with the foliage of the yellow and green eulalia. In autumn it will be necessary to lift the cannas, partly dry off the tubers, place them in sand and shelter them securely from frost.

One foe to the canna most writers overlook, and that is the "cabbage" or "cut worm." They get into the funnel shaped leaf before it unfolds and gnaw their way out, leaving ragged uneven holes or the entire leaf cut off at the mid-rib. When a leaf has been thus mutilated cut it off at the base and hunt for the worm as the gardeners do around the cabbage plants, and destroy them. There are rarely more than two around one plant.

G. T. D.

Lexington, Miss.

#### BLAZING STARS.

THE several species and varieties of liatris or "blazing stars," or "gay feathers," as they are more popularly known, form a highly ornamental group of native plants. They are mostly natives of our Southern and Western States and may be described as being hardy, herbaceous, perennial plants growing from two to four feet in height having tuberous roots, straight, erect stems and narrow, alternate, linear leaves. The flowers are produced in the greatest abundance from August to November in spicate, racemed heads from three to four feet in height, and they vary in color according to the different varieties from red to purple. They also possess the peculiarity of beginning to open at the top of the spike and continue to open downwards. This peculiarity is characteristic of the species. The liatris is highly prized in Europe, and it should be better known and more extensively cultivated here in its own home, as but few flowers are more effective, and as they can be easily grown they deserve all that can be said in their praise.

They will grow well in almost any soil and situation but, as the size and length of the spike will be in proportion to the size of the plant, it is ad-

rens of Virginia to Florida and is often used to perfume tobacco. It grows from one to three feet in height and produces its purple flowers in large erect heads during the months of August and September.

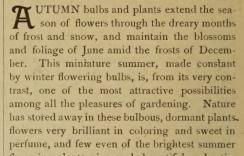
L. pycnostachya is also known as the "Kansas gay feather" on account of its being a native of the prairies of the far West. It attains a height of from two to four feet. The flowers, which are of a pale purple color, are produced in very dense spikes from ten to twenty inches in length. This species when in bloom should have its flower spikes supported by neat stakes.

L. scariosa grows from two to four feet in height and flowers from August to September. The flowers are of a dark lavender color.

L. squarrosa is popularly known as the "blazing star." It is found growing from Pennsylvania to Florida and westward. In cultivation it attains a height of three or four feet. The flowers, which are of a bright purple color, are

produced during the month

L. spicata is popularly known as the "button snakeroot." It is a native of the Western and Southern States. In cultivation it



AUTUMN BULBS AND PLANTS.

flowering plants give such bountiful and satisfactory results for the attention bestowed. If the bulbs are planted in the open borders or in beds they produce a profusion of bright bloom when most other plants are just commencing to start into growth, thus increasing the length of the flower season in the garden.

The bulbs most used for winter flowering are Roman hyacinths, narcissus, single tulips, lily of the valley, freesias, and callas. I use sixinch pots for all these except callas, and any good rich soil, such as is used for other pot plants. (In setting the bulbs I press them into the soil and leave about one-fourth of their depth uncovered. .I then select a level spot in the yard and set the pots containing the bulbs on it close together and cover them up at once with four or five inches of rough manure. Be-



MACROCARPUS.

BLOOD RED.

visable to give them every opportunity to properly develop themselves; they should be given a deep well enriched soil and a sunny situation; in addition to this they should be given a good dressing of well decayed manure every fall, and this should be dug in around the plants early in the ensuing spring.

Propagation is effected by seeds, which should be sown on a nicely prepared border early in the spring; as soon as the young plants are strong enough they should be transferred to another spot similarly prepared and placed in rows at least one foot apart each way. By fall they can be planted out where it is intended they should bloom.

The following are among the most distinct and desirable varieties:

L. cylindriaca grows about one foot in height and produces its clear rosy-purple flowers in dense spikes during the month of August.

L. elegans grows about three feet in height and produces its deep purple flowers in showy spikes, which are over one foot in length, during the months of August and September.

L. odoratissima is popularly known as the "vanilla plant." It is a native of the pine bar-

grows from two to four feet in height. The flowers are very showy and of a rich purple color. It has long narrow grass-like foliage,

Floral Park, N. Y. CHAS. E. PARNELL.

## A HEDGE OF RICINUS.

PEOPLE plant the stately ricinus, or castor oil beans, in odd spots here and there, but I am sure they do not get the luxuriant effect they would if massed or put in rows. I inclose a photograph of last year's growth and would suggest that a picture be made of it. Being a deep rooted plant it needs mellow soil or plenty of manure as it is a gross feeder. Give them lots of room and in a conspicuous place and they are "immense." My tallest was eleven feet and eight inches. Who can beat it?

Brooklyn, N. Y.

CLIMBING CATHARINE MERMET.-A climbing variety of this beautiful tea rose is announced as originating at Elm Grove, Wisconsin, two years since. The blooms are said to be exactly of the same shape and color as the original variety, but the plant is a rank climbing grower. Plants propagated from the parent climber retain the climbing habit.

fore spreading this over them give each pot a thorough watering, which will be all they will require, as the covering will keep them sufficiently moist afterward. The bulbs planted in the beginning of September will be well rooted by the middle of October, when a few can be brought into the house and placed in a sunny window. If kept well watered the sweet waxen flower buds will soon appear. Care must be taken with all bulbs in the way of seeing that they are well rooted before they are brought into the heat or they will fail to bloom successfully. The Chinese sacred lily blooms well in water, but most other bulbs do best planted in good soil. After being forced in the house all bulbs should be turned out of the pots and planted in the garden to give them a chance to ripen their foliage. They will not bloom well in the house again, but I have a beautiful bed in the yard composed entirely of bulbs which have been forced for winter flowers. I plant annuals in this bed during the summer. These shade the bulbs, and by the time the frost comes and kills the annuals I see many little green blades from the bulb roots venturing forth.

Winnsboro, S. C. PRUDENCE PLAIN.



#### HOLLYHOCKS.

They stood in a row by the garden gate Stately and fair and tall; There was yellow, and red, and a silvery white. And the brown bees loved them

Pink, and cream, and the dark maroon

Grew neighborly, each in its place:

Their silken gowns with their dainty folds

Were worn with an airy grace.

They heard through the summer afternoons The drone of the bumble bee And the cricket's song, and the whir of wings, As the humming bird came to see

Which was the fairest, pink or white, Yellow, or hearts-blood red; He drank their wine with his slender bill,

And ate of their honey bread; And when away on his whirring wings

On another honey quest, They fluttered their quaint old fashioned

As they speeded the parting guest.

There was never a hint of a broken heart, Though lovers would come and go, But "give of your best, and trust for the rest,"

Was the motto of Hollyhock row.

Pink and purple, and silvery white, Fair and stately and tall, They stood in a row by the garden gate And the brown bees loved them all -SARAH A. GIBBS, Fair Haven, Vt.

## HOW TO GROW MUSHROOMS.

HE cultivation of mushrooms is attracting a great deal of attention in this country at the present time, and there is no doubt they will be more extensively grown when their peculiarities are better understood. Like everything else, it is very easy to grow them when you know how.

A man may be able to grow mushrooms and may prepare his beds all right, but if the spawn should be of inferior quality all the trouble he has taken will be lost; so it is very essential that he should work very carefully and do everything in the best possible manner to attain success.

There are several places where mushrooms can be grown where it would not be possible to grow anything else, for instance, under the benches of greenhouses when the temperature does not exceed 60 degrees, or even in cold pits outside where the frost does not reach them. In the latter case the beds must be made up not later than October or it would be too cold for the spawn to run. For myself, I do not think there is a better place than a cellar, and that is where we grow them here. The cellar should not be less than seven feet deep, which gives plenty of room for two beds deep. The beds should not be wider than four or five feet, which enables us to pick them without breaking the young ones. A pathway should be left between each line of beds, for emptying and refilling them, not less than three feet wide. If there is no heat there should be sufficient pipe put in to keep a temperature of sixty degrees in the coldest weather. Of course, a cellar does not require the pipe of a greenhouse as it is so much more protected from the weather, and the less fire heat used the better for the mushrooms, for I consider the best; pieces should be broken up

they grow much more sturdy, and consequently weigh heavier when they are grown without it.

Manure should be procured as fresh from the stables as possible and should have the longest straw shaken from it. We procure ours from the city by the carload and have very good success with it. The manure should be thrown into ridges about three feet high and four feet wide, and be turned over thoroughly and well shaken up every two or three days; it should not be let turn white and if it gets dry it should be moistened; but it must not be saturated by heavy rains or other causes. An open shed is a good place to turn it in, but it can be turned outside and covered up from heavy rains. The chief thing is to get the rank smell out of it, for mushrooms will not grow in anything that is foul. In about two or three weeks it will be ready for making up into beds. These should be about ten inches deep. Some growers mix about one-fourth soil with manure, but, as a general thing, I have not had such good success with that mixture. I think it may be more satisfactorily used for beds that are made up about September when the weather is warm, for it certainly prevents the manure from getting very

In about a week the beds should be examined to ascertain if they are fit for spawning. If the temperature should be above 90 degrees, with a tendency to rise higher, the bed is too warm, and should be left a few days longer. At the same time particular notice should be taken that the beds are not getting too dry; if that should happen they should be turned over and moistened and made up again. When the temperature has gone down to about 85 degrees the beds can be spawned. English brick spawn

about two inches square, and inserted about two inches deep; the whole should be well beaten together. I omitted to say the beds should be made very firm before spawning. In about ten days or a fortnight the beds will require to be covered with soil, but that will depend upon the temperature they are in. If it be not above 70 degrees the soil can be put on to a depth of one inch and beaten on firmly. It should be just moist enough to stick together when pressed with the hand. The manure for making the beds should be in the same condition as regards moisture.

They should now have a light covering of litter or hay to prevent evaporation, for they must not be allowed to become dry. In about six weeks the mushrooms should begin to appear. Sometimes they come quicker than that. Keep now an even temperature of about 58 degrees; this I consider the best for them. If you have occasion to use fire heat you will need to dampen the walls and paths occasionally, for mushrooms dislike a dry atmosphere. The beds will continue to bear for two months if made up right and properly attended to.

The mushrooms should be pulled up and not cut off, for if the roots are left they decay and kill the spawn around.

Should the beds require watering it should be done very carefully and lightly, for too much water will be certain to kill the spawn. Ventilation should be given very carefully; they dislike draughts; even a slight covering of hay makes a great difference to them in helping keep it off. They should be cut when the frill begins to break before they get open wide. They then weigh the heaviest, besides selling the best, though some people prefer them for broiling when they are very large.

The new mushroom, Agaricus subrufescens, does not seem adapted for winter culture. I think it is a summer variety. The spawn of it seems to run very readily in the beds; those that were spawned last December are just full of spawn running in all directions, but as vet have developed no mushrooms. I think it will take the heat of summer to bring them out. It is different from A. campestris and time wiil tell whether it will be a profitable variety. I am going to make up beds outside very shortly and test its merits thoroughly .- Paper prepared and read by Thos. Griffin before the New York Florists' Club.

CRIMSON RAMBLER .- This is the name of a new Polyantha rose lately introduced into England from Japan. As yet we have seen no full description of it. The foreign journals unite in speaking of it in terms of praise. A writer in the Journal of Horticulture, referring to the rose shows about London this spring, says in regard to this variety that "those who, like myself, have visited most of the shows held in and around the metropolis this year cannot have failed to notice the above charming rose. It is perhaps one of the most showy roses in cultivation. It appears to belong to the Polyantha class, and is a vigorous grower, hence its name. Most of the plants exhibited, however, and which I have seen, have been grown as bushes in pots, for which purpose it seems admirably adapted. The flowers are produced in clusters in immense numbers, and are of a brilliant crimson color." It is thought to have considerable hardiness, and where it is so it is well adapted to growing on fences and walls.

THE FOXGLOVE. FINE example of what cultivation and years of care will do in increasing the size and beauty of flowers is seen in the foxglove. This plant grows wild in most parts of England and Europe in dry grounds. In its native state the flowers are much smaller than we see them in the garden and the color is a purple with scarcely a variation. By continued cultivation and selection the plant has been increased in size, the flower spike lengthened and the individual flowers much enlarged, while a variety of colors and markings now present themselves, making it a plant of great beauty. As a wild plant it is conspicuous, interesting and attractive, but in cultivation the best forms are admirable. One of the cultivated strains is known as maculata superba, remarkable for the bold spots or marks in the throat of the flower. Another noted strain is that of the gloxiniaflowered, gloxiniæflora. The flowers of this variety are also beautifully spotted and are so large that its peculiar name is entirely appropriate—the resemblance of the flowers to most of the gloxinias being very strong. The plant is a strong grower easily raised from seeds, blooms the second year. It is an imperfect biennial, for it frequently lives through a third season, bearing its flowers two successive summers. It is in bloom through July and August. It does well in the open ground with full exposure to the sun, but also thrives in the partial shade among shrubs. Many plants find the soil in such a situation too dry to thrive, but the foxglove appears well suited with it. and can be emproyed there with the best effect, making an undergrowth which lights up the border at a season when most of the shrubs are flowerless. Another place where it can be used to advantage is among ferns, the dark green fronds forming a fine background to show off the bloom. It is a useful plant for those with large grounds or borders for perennials. The seeds can be sown early in the spring in the open ground, or in the house or frame; if in the former, care will be necessary to shade the plants until they have attained some strength, as when quite young they may be quickly injured by a hot sun. As soon as the plants have made a few leaves they can be transplanted in a place a little shaded, and be placed about six inches apart, or far enough to allow them to develop. In the fall they can be removed to permanent places. Good specimens of the plant in flower stand about four feet in height. It is best to

a supply, otherwise the plants will run out. One of the common English names of the plant is "Witch's Fingers." In Wales it is called "Fairies' Gloves." Fairies were for-

sow a few seeds every year, thus keeping up

merly often called folks, hence it was called folks' glove, and then by a simple change in orthography, foxglove, a word which carries us far away from its origin and early associations.

The German Fingerhut and the French Gantelee, Gantelet and Doigtier all signify a glove, as also does the Latin name Digitalis. In the name Gant de Notre-Dame the French testify to their appreciation of the plant, and at the same time inite, the main body of the leaf being a rich silvery satin,

The Foxglove in whose drooping bells the bee Makes her sweet music

Keats similarly refers to it:

Let me thy vigils keep 'Mongst boughs pavilioned, where the deer's swift

Startles the wild bee from the Foxglove bell. In Wadsworth's sonnet we are told that Bees that soar for bloom

High as the highest peak of Furnace Fells, Will murmur by the hour in Foxglove bells.

## SOME SATISFACTORY PLANTS.

REX BEGONIA, Roi Ferdinand major, gives such excellent satisfaction for growing in the window of a common room, I would like others to know of its rare value for this purpose. Many think the Rex variety of begonias cannot be grown without great trouble, this one grows as easily as a geranium, which is saying a great deal. The leaves are very large and tropical looking. Their texture is most exquis-

bordered with red, a zone of red is also near the center, and the center is green, rich and velvety; the stems are red and plush-like. The whole plant is magnificent. Mine has been on a bracket in an east window, it has become a large fine plant in a year. The soil was a good rich garden soil mixed with sand. A liquid fertilizer, made from one teaspoonful of ammonia to one quart of water, has been frequently used upon it

with gratifying results. No insect pests have troubled it. It has put forth many buds, but most of these I have picked off as I preferred to have the entire strength of the plant go to leaf growth. Another plant I prize very much is Farfugium grande; this

plant is commonly called the Leopard plant because of its spotted leaves. It grows freely and is easily cared for. A rather gross feeder, and the richer the soil and the more frequently it drinks of a liquid fertilizer the more rank the growth. It does better to be repotted every few months. The leaves are thick and leathery, a rich green, shining like the richest satin, and spotted with yellow

or white, the older they are the whiter grow the spots and the larger.

The Chinese hibiscus is a flowering plant that I have grown to like very much. Its foliage is a handsome glossy green, except Coopen, which shows a most lovely combination of pink, white and green in its slender leaves. This one I think the handsomest of all the hibiscus because of its elegant foliage; its flowers are very pretty too, though not as large as those of some of the other varieties. Gigantea has very large blossoms, so has Versicolor, the flowers of the latter are of a lovely deep rose color with an apparent striping of white on the outside. I was entranced with this plant when it first showed me its lovely flowers. Auriantica and Minneatus give me double flowers, both red but of entirely different shades. The plants begin

to flower when small and are quite free bloom-The flowers are short-lived but pretty while they do last. Care must be taken not to touch the buds as it is apt to cause them to fall.

Oxalis Ortigiesi is a plant I prize for its foliage, though it blooms very freely too. The leaves are of a very dark bronzy green with a lining of rosy purple that gives you an idea as you catch a glimpse of it that it is a flower of that hue. The plant grows upright, branches very freely, and sends out flowers continuously; these are yellow and of the true oxalis type.

The old fashioned dew plant makes a very pretty plant for baskets or brackets. I have one in the center of one plant shelf; it has trailed its

DIGITALIS, OR FOXGLOVE. dicate their devotion to Our Lady.

Wm. Brown the English poet describes Pan as gathering the flowers to glove the hands of his mistress-

To keep her slender fingers from the sunne, Pan through the pastures oftentimes had runne To pluck the speckled foxgloves from their stem, And on those fingers neatly placed them.

Preparations from this plant are used in medicine. The juices are sedative, intoxicating and poisonous when taken in sufficient quantities. But this fact should-be no objection to its cultivation, as it is entirely harmless to handle. The noxious principle of the plant is apparently wanting in the flowers, for the bees frequent it and gather honey; Barry Cornwall writes:

shining, dewy leaves along the whole length of the shelf and sent shoots in every direction; it is pretty to bring its long green branches up about the pots of other plants and let it form a sort of lambrequin or fringe of green along the entire shelf.

The geranium La Favorite is well named. Its great trusses of pure white double flowers are lovely and last a great while. Queen of the Fairies is another pretty geranium, its color is the most delicate pink, entirely different from the pink geraniums so often seen.

Ivy geranium L'Elegante is a beautiful thing, its leaves of the true ivy shape are very graceful; they are bordered with white and show a rosy pink on the under side.

Ipswich, S. D. ROSE SEELYE-MILLER.



In this department we will be pleased to answer any questions relating to Flowers, Vegetables and Plants, or to publish the experiences of our readers. JAMES VICK.

### Golden Button.

Will you please inform me what name is given to the little yellow double old fashioned flower called M. I. S. golden button?

Patchogue, N. Y.

The plant referred to is probably the double Ranunculus, or double buttercup.

## Ivy Geranium Buds Blighting.

Will you please inform me the cause of ivy geranium blighting? It is Madame Thibaut. I never have had a blossom. My plant is very large Pine Woods, N. Y. S.

S. L. M.

This geranium if kept in the sun would, no doubt, perfect its bloom.

## Answer, Query and Answer.

Answer to M. T., Udall, Kans., in Vick's Magazine, June number, page 121: The shrub with smooth green stems and yellow rose-like flowers is Kerria Japonica, or Japan globe flower, formerly called Cor-

Query-Will you please tell me the correct name of the old hundred-leaved rose?

Georgetown, Ky.

The name of the rose is Centifolia, Cabbage, or Common Provence.

## April Magazine-Easter Lily.

In the April number of your Magazine I am sure I read more than an ordinary number of things that I had wished to know. The article on "Lilies" interested me very much. The Easter lily which you sent me in the "Star Collection" was about a yard tall with three blossoms, the largest bud measured eight and one-half inches. I am so well satisfied with it I wish to try more for next winter. lection of bulbs was so very satisfactory I wish to thank you again for it and the fair treatment I have always received at your hands. M. T. M.

Dryden, N. Y.

## Diseased Snowball.

Will you kindly tell me through your excellent magazine what is the matter with my snowball bush, and the remedy? It has been very nice, unusually so, until this year, the blossoms are not bigger than the ball on a baby's rattle and badly curled, as the foliage is also. A. SUBSCRIBER.

Norfolk, Mass.

As it is impossible to tell the cause of the trouble from what is here said of it we can only advise that careful examination of the plant be made, and if insects infest the plant that means be taken to destroy them. The snowball is a shrub of strong vitality and not ordinarily subject to disease.

## Training Easter Lilies.

Reading directions for potting Easter lilies in the June number of the Magazine, brings to mind having seen a cut representing this lily trained to a more compact form than it naturally makes, thereby greatly increasing the number of blooms. Will you kindly inform me through the "Letter Box" if pinching back is a practical method of training this plant? have always supposed that any interference with the natural growth of the stalk would rob it of its buds. As its extreme height is an objection in window culture perhaps other readers of your paper will be interested to know if their favorite plants can be made more shapely without loss of flowers. Westboro, Mass.

The idea suggested is quite impracticable. Pinching back would cause the loss of the

#### Insects on Honeysuckle.

I take the liberty to write to you in regard to my honeysuckle. I have a red one and a pink one. is simply covered with lice which are killing it very fast. They seem to be big lice, more like cabbage lice. The leaves all curl up and die. I have lost more than half of it. As it was such a beauty I hate to see it die. We have tried hellebore but it did not seem to do any good. Will you kindly advise me what I can now put on it to save what I have left? I shall be greatly obliged to you if you could suggest anything, as I hate to lose it.

Westernville, N. Y.

If the insects are green flies some tobacco water thrown on the plant with a syringe would destroy them. The woolly aphis is often troublesome to the honeysuckle and possibly this is what infests the plant in question. In that case we advise the use of the kerosene emulsion, the same as described on page 137 of the July Magazine. This preparation will destroy both the woolly aphis and the green aphis. It is needless to let a plant be infested with these insects.

#### Strawberries-Roses-Grapes-Raspberries.

Will you please inform me if it is necessary that the runners on strawberry plants should be kept pinched off or left to form more plants?

I got some Moss roses this spring and they are growing finely. Will it be all right for me to leave them out this winter by putting a box over them, or ought I to take them in?

What time of the year is the proper one to pinch back grapes, raspberries and such fruit, so they will grow stocky and strong for winter?

A piece of rich soil, such as a bed for strawberries should be, is capable of having the plants stand on it about six or eight inches apart all over the ground. The most of these plants will be produced from the plants set in the spring. However, in order not to have the early set, or mother plants, weakened by the production of too many offsets it is best to keep the runners cut off up to the middle or last of July. Then the old plants will have become well established and strong, and will make all the runners needed during the next two months. Some care should be given that these are properly trained so as to be well distributed over the ground.

Cover the roses well over with dead leaves and then turn a box over all, and they will be well protected.

The young growth of grape vines and raspberry canes will need no pruning. The annual winter pruning of grape vines is sufficient for them. The black-cap raspberries need to be pruned in every spring so as to stand only about two and a half to three feet high according to their vigor. The red varieties if trained to stakes or wires can stand as much as four feet high. The old and dead canes should be removed soon after the fruiting season is past.

## Grafting Apple Trees.

We have some nice hardy crabs and some hardy apples but they don't bear any. When is the best time to graft them, and how to make the wax and what to make it of, and where to cut the sprouts from other trees, and how big a limb to cut to put them in?

If you have room in the Magazine to answer this we will be pleased to hear from you and greatly oblige a

Dysart, Iowa.

The time for grafting apple trees is in the spring before growth starts. The scions should be cut in October, November or December and be placed in sand or sawdust or moss, either of which is but slightly moist, and be kept in a cool, frost proof cellar until the time of their use. The scions in all cases are to be the shoots of the last season's growth. Branches from onehalf inch to four inches diameter are grafted; in large branches two grafts are inserted, one on each side. Small branches are preferable to large ones. We fear that, to one who is ignorant of the operations of grafting, the descriptions that might here be given would leave something to be desired and, therefore, we advise the inquirer to procure "Barry's Fruit Garden," price two dollars, in which the subject is fully treated and illustrated, and in which is also given reliable directions for making grafting wax.



Mrs. J. H. HORSNYDER, 152 Pacific Ave., Santa Cruz, Cal., writes:

"When a girl at school, in Reading, Ohio, I had a severe attack of brain fever. On my recovery, I found myself perfectly bald, and, for a long time, I feared I should be permanently so. Friends urged me to use Ayer's Hair Vigor, and, on doing so, my hair

## Began to Grow,

and I now have as fine a head of hair as one could wish for, being changed, however, from blonde to dark brown."

"After a fit of sickness, my hair came out in combfulls. I used two bottles of

## Ayer's Hair Vigor

and now my hair is over a yard long and very full and heavy. I have recommended this preparation to others with like good effect."-Mrs. Sidney Carr, 1460 Regina st., Harrisburg, Pa.

"I have used Ayer's Hair Vigor for several years and always obtained satisfactory results. I know it is the best preparation for the hair that is made." -C. T. Arnett, Mammoth Spring, Ark. \*

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

### BULBS IN HOUSE CULTURE.

ULBOUS flowers alone if properly managed will give an abundant supply of flowers in the window garden from January to May. And the bloom will be of great variety and beauty and most of it of exquisite fragrance. And these great results are to be attained with the expenditure of the least care and attention. No class of plants can be so easily cared for and none will give so great an amount of bloom for the time. Those, therefore, who have only the window to depend upon for the winter flowers cannot afford to neglect bulb culture or to give it indifferent attention. What this class is capable of doing should be well understood and also the way to get the most from them. In planting or potting bulbs we are not beginning a course of cultivation, like the sowing of seeds, which will require several months of care in plant-rearing before bloom is secured. The little bulbs inclose already the flowers which await only the passage of a few weeks in the soil to rise upon their stems and expand. And the weeks of waiting is mostly passed in darkness and without care.

Beginning with the Roman White Hyacinth and the Paper Narcissus there may follow a continuous bloom of Hyacinths and Narcissus of many kinds, of Tulips and Crocus and Snowdrops, of Freesias and Lilies and Sparaxis and Chionodoxas and Scillas and Alliums, and besides the truly bulbous plants there are those which have thizomes that are treated nearly the same as the bulbs; such as the Anemones and Winter Aconite and the small growing kinds of Iris. Little idea of the great wealth of bloom can be gained by this simple recital, for all these kinds of plants have numerous varieties affording great variations in color and habits of growth. Thus these bulbs of Holland are well nigh indispensable to flower growers. In the greenhouse and conservatory they show their beauty and shed their fragrance at a time when without them there

is apt to be a paucity of flowers; and thus they are also favorites with cultivators of large collections of plants, as well as with the window-

GROUP OF CROCUS.

plants is so great for the winter season one will not fail to see that by the same qualities it occupies a place filled by no other in the open border. The first mild days of spring suffice to call forth from their hibernation the plants in their garments of beauty, and before even the hardiest and earliest of our native plants show leaf and flower, some of these bulbs, the Snowdrop and Snowflake and Crocus, are already in the height of their season. But we wish par- kept there several months if desired, or a few



HYACINTHS AND CROCUS BLOOMING IN GLASSES IN WATER.

ticularly to indicate the value of the bulbous plants for the house. Their great variety has been noticed, but a point which should not be grower. Although the merits of this class of overlooked is that of their advanced state when

we receive them. They are already grown to a blooming size. All that is needed is to place them in some light soil in pots and stand them away in a cool dark place for a few weeks and then they are ready to show their handsome forms. Or the Hyacinth bulbs may only be set so that the base of the bulbs will be close to water in vases, and this will be all that they ask. Or almost any bulb will grow and bloom well in some damp moss. What other class of plants can be treated in so off-hand a way? These are plants for busy folks, for those having only a

window, for those who wish to gratify their gardening instincts with little expenditure of cash. A few cents will buy the best bulb, and a small amount properly laid out will bring a fine collection in large variety.

Another point to be considered is that most

of these bulbs can be retarded in growth as well as hastened; for instance, a lot of Hyacinths potted off and placed in a cool cellar can be

at a time can be brought out and bloomed, making the lot last in this manner for months. Another point of value is that these bulbs will bloom at a north window. By preference a sunny window should be chosen, but if not at command give them the full light of a north window and they will cause no disappointment. Not much heat is needed. and, in fact, the lower the temperature can be kept above 50 degrees the better will be

the development of the flowers. The bulbs are hardy, loving a cool climate, and even if, by some accident they should, some unlucky and severe winter night, get caught below the freezing point they will be little the worse for it if not placed too soon where it



DUC VAN THOL TULIP.

is warm. A little cold water sprinkled over them and keeping them from the sun for the next twenty-four hours after such an experience will bring them through all right." From all that has been said it is evident that the bulbs should have the first consideration for the winter window garden.

In getting a stock of bulbs the quality is the first consideration. Unfortunately not much can be learned on this point by the appearance of the bulbs, especially as seen by amateurs. In this state of affairs reliance must be placed on the dealer. Large quan-

tities of second and third rate bulbs are brought into this country and sold at very low rates, which make nearly or quite as good appearance as first class bulbs. The purchaser learns their value only after trial and sad experience and disappointment. Buyers should purchase only of responsible dealers, and they may be assured that, in view of the great competition at least, they will not be overcharged.



## THINGS NEW AND OLD.

Columbian Raspberry.—A new variety by this name, originating in Central New York, is offered in the trade the present season for the first time. At the meeting of the Western New York Horticultural Society, last January, the following notice of this variety was made by the committee on exhibits:

"J. T. Thompson, of Oneida, N. Y., shows a new seedling raspberry called the Columbian, a seedling of the Cuthbert supposed to be crossed with the Gregg. Mr. Thompson's exhibit consists of dried specimens of the canes with leaves and fruit, several bottles of the preserved fruit, and a sample of wine made from the fruit. The growth of cane of this variety, as shown by specimens on exhibition and photography of the plants, is very strong, and the fruit is abundant. The fruit of this raspberry, as seen by the bottled specimens, is a dark red, and in its bottled condition the form is well preserved. The canes root at the tip like those of the black cap varieties, It appears probable that this new variety has some valuable qualities, and that it will be worthy of special attention and trial."

Under date of July 13th Mr. Thompson writes

"I wish to call your attention particularly to the present condition of my new raspberry. It is approaching its fruiting season, and the plants are so thrifty and vigorous and enormously large and are carrying such a burden of green fruit that they excite the admiration of all who visit the grounds. It will be ripening next week."

The Ixia.—A member of one of the largest firms of bulb growers in the Island of Guernsey, Mr. Frank Hubert, is traveling in this country, and has been doing the World's Fair. One of his observations is that the ixia if it were more generally known in this country would become a great favorite, as it now is in England and France. It can be easily forced for cut flowers. Probably the cost of the bulbs might be too much to allow any profit; for the private grower, however, it is a fine acquisition.

The Pecan.—T. T. Lyon, the well known horticulturist, states that he has trees of the pecan, planted in 1888, growing at his place, in latitude 43 degrees, which have stood without protection and have been entirely free from injury to the present time. He thinks the trees might be able to stand the climate of Grand Traverse, latitude 45 degrees, if planted well within the influence of the lake winds.

A Good Dwarf Dahlia.—In the German collection at the World's Fair is a little dwarf dahlia called alba imbricata which was blooming freely early in July. It is pure white, large for a pompon.

Japan Plums.—C. K. Meyers, of Central Illinois, reports the Botan and Abundance plums to be tender and liable to have their buds winter killed in that region.

Japan Wineberry.—This shrub is said to winter kill to the ground in Northwestern Ohio. It must be very tender.

A Fine Currant.—A late number of the Gardeners' Chronicle mentions "as the finest variety we have yet seen" a variety of red currant which is the result of a cross between Raby Castle and the Cherry, by Mr. E. J. Lowe. The largest berries measure fully half an inch in diameter and are of a dark red crimson color. The flavor is not so acid as that of some other varieties. The number of berries on each cluster varies from fifteen to eighteen.

AMERICAN SEED TRADE.—The American Seed Trade Association will hold its annual meeting in Chicago, at the Leland Hotel, August 14th to 16th. J. C. Vaughan, Chicago, Ill., President; A. L. Don, New York, N. Y., Secretary and Treasurer.

#### HARDY ROSES.

A T the January meeting of the Coiumbus (Ohio) Horticultural Society a paper was read by Mr. Wm. C. Werner on the cultivation of hardy roses, from which the following extracts are taken. They contain good instructions in regard to the subjects treated.

'One of the essential conditions toward successful rose culture is a good soil of substantial character. Any good loamy soil, if well worked and enriched with composted barnyard manure, will give satisfactory results. If the soil is of a stiff, clayey nature, so much the better. \* \* \* A sunny and airy place in the garden should be the spot selected for a rose bed. I use the word airy, because we may have a spot against the south side of a building that would be sunny enough, it is true, but yet not be suited to the best development of roses. Although roses do best if standing out clear, yet a location somewhat sheltered from cold northern winds is desirable. During the later part of summer many roses lose a part of their foliage. On this account the location selected may well be somewhat to one side, and not in the most conspicuous part of the lawn or grounds. For the same reason, very few roses are adapted for growing singly. The Madam Plantier would, perhaps, be as good as any when an isolated rose bush is desired. \* \* \* To grow a rose to perfection, it must be carefully planted. Allow me to use that word again, There is no ornamental plant grown that requires better treatment than the rose. Careless planting is, perhaps, at the bottom of more rose failures than any other cause. The bed should be pre-pared long enough before, that the ground has had time to settle to a somewhat natural condition. If the roses are outdoor grown stock, dig a hole somewhat larger than the spread of the roots, and of sufficient depth that the plants may set somewhat lower than when growing in the nursery. The soil should be firmly trodden down around each plant. Never plant directly after a heavy rain, as the soil is then more or less sticky and becomes hard and caked when dry. \* \* \* In regard to the time for the setting out of pot plants, I need only say this may be done as soon as the weather becomes settled, depending upon the season and the location. These should be planted considerably deeper than they were in the pots. Pressing the soil firmly about the plants, and avoiding work in wet soil, of course, holds good here, as in the other planting. \* \* \* After roses are planted, that is not all; they require constant attention. The first requirement after planting is a mulch of some sort. While this may not be considered necessary it is always beneficial, protecting the roots during the winter and having a tendency to keep the earth cool and moist during the summer's drought. \* \* Late in March, or early in April, the regular pruning may be attended to. Here we should bear in mind that the more wood we leave the more of a task is laid upon the roots. I believe I said in connection with the planting, that in order to have fine flowers and healthy foliage, the plants must have plenty of working roots, and not so much top as we usually see. We may reduce the whole question of pruning to this: Prune all weak or moderate growing varieties severely, say to four or six buds. of stout, robust growth require little more than the cutting to half their length given the previous fall, For the hardy varieties, more than a slight banking up is hardly necessary after the first year. Yet if cannot be denied that protection is beneficial for older plants. Let the roses be freshly planted, or established, the methods employed may be the same. Presuming that the newly planted roses have been properly cut back and the ground covered with a suitable mulch, when severe weather comes on, and not before, they may be given a slight covering. Evergreen boughs are the best material for this purpose; they thoroughly protect the plants from the cold and drving winds and do not look unsightly. When evergreen boughs are not available, any branches loosely laid on the bed, with straw firmly worked and woven between them, will answer the same purpose. The next season protection may be given in the same way, except that the plants after receiving the half pruning recommended, be bent over and held down by a few pegs, removing some of the earth from the side to which the plant is bent. Some judgment must be exercised that the plants do not become broken in the process or by the weight of the protection and snow. Another method is merely to cover the plants with a few inches of earth after they are bent and held in place. Except for tender varieties, such protection is unnecessary after the first year. A good banking up of earth and mulch is all sufficient." When evergreen boughs are not available, any

Plant-Grubs-Lily of the Valley.

Please tell me in your next issue what will kill a small green worm about a half an inch long that eats a hole up the centers of the stalks of my pansies and zinnias?

I have lily of the valley which I got this spring.

Tell me how to make it bloom again; it has had one single blossom.

R. T. M.

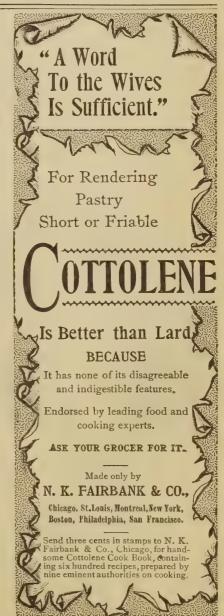
Lamberton, Minn.

It will be hard to reach the borers already in

It will be hard to reach the borers already in the stems, but if the insects from which these grubs are hatched were known they might be destroyed by the proper kerosene mixture. The best advice we can offer is to examine carefully the plants and cut away any stems which appear to be failing, or in which the borers can be found, and burn them. If the insect is discovered treat it to a dilution of kerosene emulsion.

Lily of the valley cannot be expected to bloom again until next spring.

HORTICULTURAL CONGRESS.—The date for the World's Horticultural Congress at Chicago has been fixed, beginning August 16th, 1893, and continuing four days. Horticulturists throughout the world are cordially invited to so arrange their visit to the World's Columbian Exposition that they may be present at the above date. The Society of American Florists and the American Seed Trade Association and the American Pomological Society will hold their annual meeting during the same month; therefore the largest possible attendance is anticipated. Correspondence may be addressed to J. C. Vaughan, Chicago, Ill., Chairman of the Local Executive Committee.



### NARCISSUS CULTURE.

THE culture of the Narcissus as a winter blooming plant is becoming very popular in this country, as it long has been in Britain and Europe. The great stimulus in this direction was the introduction some years since of the Joss Flower, the so-called Sacred Lily of the Chinese, and now known as Narcissus Grand Emperor. The novelty of raising the plants with the bulbs in bowls of water, and the ease of the whole proceeding, brought numerous amateur cultivators into the field who probably would never have entered under ordinary conditions. Nor has this movement reached its height; every year the number of Narcissus-growers increases and the number of bulbs demanded is very much greater. Having learned the ways and the merits of Grand Emperor our bulb growers very naturally seek to learn of other kinds of Narcissus, and the demand for all varieties in the trade is now large. Probably most of our readers have heard the legend of the Sacred Lily, which is as follows:

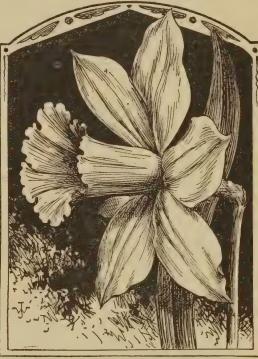
"Once upon a time a father left his property to his two sons with the understanding that it should be equally divided; but the elder son seized all the tillable land and left the younger nothing but an acre covered with rocks and water. younger son, failing to obtain justice, sat at the water's edge bemoaning his misfortune. A be-nevolent fairy appeared and giving him these Narcissus bulbs told him to drop them into the water. Shortly afterwards their flowers were developed, and the neighbors crowded to see the fairy's gift. In the course of a few years the badly treated brother accumulated a fortune by the rapid increase and sale of his bulbs. Then the elder brother, envious of the prosperity of the younger, bought up great numbers of the bulbs-hoping to get a monopoly by getting all of them-at so heavy a price that he was obliged to mortgage his property to procure funds for the purpose. He planted all his good land with bulbs, but they soon began to die, as they cannot live long out of water. He was ruined, while his brother, who had bought the mortgage, foreclosed it, and became possessed of the whole estate in time to replant some of the dying bulbs in the watery acre."



HORSFIELDII.

The value of this legend is that it teaches the importance of water in raising the Narcissus—not only Grand Emperor but all others. The importance of water in blooming the Narcissus was well emphasized in an article in this Magazine two years since, from which is made the following extract:

"Nothing affords me so much pleasure as the Narcissus, particularly the variety known as Paper White. They can be grown either in water or in earth and no one can possibly fail to succeed with them. If given water enough they are sure to blossom, and, with a good supply of bulbs and proper management in planting and bringing them forward, a succession of blooms can be obtained the whole winter. My experience with them has been so satisfactory that I can confidently recommend them to everyone for



ARD RIGH, OR IRISH KING.

winter-blooming. When potted several can be placed in a five-inch pot; it is not essential to have particularly good soil for the Narcissus, but it must be kept wet; not moist, or damp, but wet. The bulbs seem to live on the water alone. I like best to grow them in water for then I am sure they are wet enough. I usually put nine or a dozen bulbs in a large glass dish, nine or ten inches deep, with a spreading

top. Put a handful of pebbles or shells in the bottom of the dish and water enough to nearly cover the bulbs. A little charcoal in

the water will tend to keep it pure, though I have had no trouble in that respect when I removed the outer covering of the bulbs, which can be done without injuring them. As the water evaporates more must be supplied. I have tried growing them in hyacinth glasses but they did not do as well as when the bulbs were partially submerged. The bulbs will blossom in three or four weeks, according to the time of planting; those planted early in the season usually required four weeks, while those planted later sometimes blossomed in less than three weeks.

A dish with a dozen of them all in blossom at once fills a room with beauty and fragrance, and does much to make our winter months endurable, but I would advise planting some in pots as well; they can be taken to church for decoration or given to friends. Some florists call the Paper White Narcissus hardy, but I think it is not.

The Soliel d'Or Narcissus has done equally as well as the Paper White for me in blossoming in water. I have never tried it in soil. It is particularly desirable for outdoor culture. A

friend to whom I recommended it wrote me: 'The Soliel d'Or Narcissus was a blaze of glory in my garden; I was delighted with it and mean to have twice as many of the bulbs next year.'"

For winter blooming in pots there are some other varieties besides those mentioned which will be found particularly satisfactory, and among these is the Bulbocodium or Hoop Petticoat Narcissus, a beautiful, bright yellow

flower, funnel shaped. From three to six bulbs can be placed in a five-inch pot. Keep them in a low temperature, or about fifty degrees, and in a full exposure to the light, not allowing them to go dry or lack for water.

Narcissus poeticus is an excellent variety for pot culture, the Gold Trumpet, and Silver Trumpet are very beautiful, and in fact we think there is not a variety named in our list of Polyanthus Narcissus which would not prove entirely satisfactory. A variety which is a great favorite for cutting and is raised by florists, often in immense quantities, is Leedsii. This has a yellow perianth with a cup of deep orange color.

The variety Horsfieldii has the reputation of being one of the most beautiful flowers. The flower is very large, with a white perianth and rich yellow trumpet, very fragrant.

Sir Watkin is another very large fine flower with a rich sulphur colored perianth, and a yellow cup tinged with orange, resembling Leedsii in form.

What is commonly called the Tenby daffodil, Narcissus Obvallaris, has a sulphur white perianth and a rich yellow trumpet, large and deep and finely recurved.

Princeps is another variety similar in form, with a large, handsome, showy flower. It is often called the Giant Chalice Flower.

Ard Righ, or Irish King, is a magnificent flower with a large yellow trumpet, and a broad spreading perianth, a very early bloomer and one of the easiest to raise in pot culture.

Her Majesty is a fine forcing variety in the style of Grand Monarque and Soliel d'Or, being called a bunch-flowered daffodil since the flowers are borne in clusters. Perianth white, spreading, very broad; cup a handsome orange; very fragrant. A most beautiful and desirable variety. Some of these kinds have never been offered



SIR WATKIN

in this country until the present autumn and we have no doubt that the lovers of this fine class of flowers will avail themselves eagerly of the opportunity to possess them. They will prove to be novelties of the highest merit and which cannot fail to be appreciated, their beauty and fragrance captivating the senses and commanding our homage.

## A Minneapolis Miracle.

## THE REMARKABLE CURE OF J. B. WHITE OF THIS CITY.

A Cripple for Two Years, Pronounced Incurable by Physicians and Given up by His Friends to Die—How He Obtained Relief and Became a Well Man— His Daughter's Marvelous Improvement.

From the Minneapolis Journal.

"Precious is the panacea that cures when hope is gone and medical advice pronounces the death sentence-'incurable.' How terrible it is to think of leaving this sweet life before the allotted years of man's time here on earth are spent." Thus spoke J. B. White, of 1201, 3d St., N. E., last night to a Journal reporter. Mr. White has been much talked about of late, and the following conversation explains why:

"I am a native of Shediac, New Brunswick, and of French descent. I have been in Minneapolis for many years. I am now 60 years old. I fell from a building two years ago and broke my thigh, besides injuring myself internally. The doctors could do nothing for me but let the bones grow together as best they could. When I was able to walk on crutches I came near dying from the complication of troubles that had set in after the fall. For one year and a half I walked on crutches, striving in vain to find some relief from the misery I felt night The worst part of my afflictions was that I could not eat anything. If I could have taken nourishment and kept it down I could have stood the pain better. I had four doctors, and kept taking all sorts of medicines. I had to stop all of them or I would have been a dead man. I have enough bottles left to start a drug store. I would be troubled so with headaches, and my hips would pain me so that I often thought I should go crazy. I was so emaciated that there was pothing to me but skin and bone. Last summer I telt as if I was nearly dead. My kidneys then began to bother me. I got so I could not sleep only at intervals. Finally I gave up in despair. One day I was sitting out on the porch. It was a beautiful sunny day. The singing of birds and the odor of flowers set me to thinking of my childhood days. From that my thoughts reverted to the little French weekly paper, La Moniteur Acadien, that we got, and I thought I would like to read it and see how things were at my old home. I told my wife to give me the last number. She brought me the one that came that morning. The first thing I saw was a long article about the miraculous cure of a cripple. I read on and on, be-coming more interested than ever. The patient described in the article said that Dr. Williams' Pink Pills for Pale People cured him and they would cure others. The story aroused my interest and I induced my druggist to send for them. I did not expect relief right away, but them. I did not expect tends soon they made the headache pass away. After days I could eat. People laughed at me when I began to take the pills, telling me I was taking so much candy. But the day I threw away my crutches they thought different. I am now well and hearty as a young man of 25."

At this juncture his married daughter, Mrs. N. White, came into the store. "There," said he, "is another case. She has tried them, too. The reporter thought it would be a good idea to speak of her case also, sincé it was a woman's. Mrs. White married a man of the same name as her father, so this accounts for the same name.

"The doctors," she said, "told me I had uterine trouble. I was in a miserable condition. Nothing that I took could alleviate the pains I would feel in my limbs and abdomen. I often had fluttering of the heart, and frequent weak spells. I would eat, but it would do me no good. I could not sleep. I was in misery and despair. My father took Dr. Williams' Pink Pills, and his improvement was so rapid that I thought I would take them too. At first I felt worse, and then I began to mend so rapidly that I was astonished. I have taken seven boxes and am now nearly well. I can do my own work and can sleep and eat well. In the mornings I feel refreshed after a night's rest."

August Grotefend, who keeps the Germania Drug Store, at 1011 Main St., N. E., corroborated what Mr. White had said above in regard to his condition, saying, "I have sold a great many since these cures. Some of the lumbermen going in the woods have taken half dozen box lots of these pills with them. tainly have done a wonderful lot of good and should have the entire credit of the cures.'

On inquiry The Journal reporter found that these pills are now on sale at the various wholesale drug houses of Minneapolis and St. Paul, and are meeting with a good sale, but not as fast as they will sell as soon as their merit is fully known. He also found that they were manufactured by Dr. Williams' Medicine Company, Schenectady, N. Y., and Brockville, Ont., and the pills are sold in boxes (never in bulk by the hundred) at 50 cents a box, or six boxes

for \$2.50.
Dr. Williams' Pink Pills are a perfect blood builder and nerve restorer, curing such diseases as rheumatism, neuralgia, partial paralysis, lo-comotor ataxia, St. Vitus' dance, nervous headache, nervous prostration and the tired feeling therefrom, the after effects of la grippe, influenza and severe colds, diseases depending on humors in the blood, such as scrofula, chronic erysipelas, etc. Pink Pills give a healthy glow to pale and sallow complexions and are a specific for the troubles peculiar to the female system; in men they effect a radical cure in all cases arising from mental worry, overwork or excesses of any nature.

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MISS FLORENCE E. BEHLER,
No. 37 Alma St., Alleghany, Penna. writes: Derma-Royale
works like a charm. My face was covered with freckles
and in less than two weeks' time they are all gone. My
complexion is now clear and white as a child's. Everyone
can see what Derma-Royale did for me.

Mrs. Ella M. Murray, Newton, N. C. writes: I have used one bottle and have found a great change. I had what the doctors here called Skin Leprosy—large brown spots, causing no pain or trouble, except the looks. Now they have entirely gone and I can recommend Derma-Royale highly. Please send me your terms to agents.

May Yon Hoene, No. 807 Dayton Street, Newport, Ky. writes: For nearly five years I was afficted with eczema. My face was a mass of sores and scabs and the itching was terrible, I found nothing that could help me until I tried your Derma-Royale. I have not used quite a bottle and my skin is smooth and clear. I call myself cured, and consider Derma-Royale the greatest remedy in the world.

Miss Lillie Hanna, No. 23 Brainard Block, Cleveland, Ohio, writes: Your Derma-Royale cured my blackheads in two nights.

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Nothing will CURE, CLEAR and WHITEN the skin so quickly as

The new discovery for curing cutaneous affections, removing discolorations and bleaching and brightening the complexion. In experimenting in the laundry with a new bleach for fine fabrics it was discovered that all spots, freckles, tan, and other discolorations were quickly removed from the hands and arms without the slightest injury to the skin. The discovery was submitted to experienced Dermatologists and Physicians who incorporated it with well known curatives and prepared for us the marvelous Derma-Royale. THERE NEVER WAS ANYTHING LIKE TT. It is perfectly harmless and so simple a child can use it. Apply at night—the improvement apparent after a single application will surprise and delight you. One bottle completely removes and cures the most aggravated case and thoroughly clears, whitens and beautifies the complexion. It has never failed—IT CAN NOT FAIL. It is highly recommended by Physicians and its sure results warrant us in offering

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and us in offering

500 REWARD.—To assure the public of its merits we agree to forfeit Five Hundred Dollars cash, for any case of eczema, pimples, blotches, moth-patches, brown spots, blackheads, ugly or muddy skin, unnatural redness, freckles, tan or any other cutaneous discolorations or blemishes, cexcepting birth-marks, scars and those of a scrofulous or kindred nature) that Derma-Royale will not quickly remove and cure. We also agree to forfeit Five Hundred Dollars to any person whose skin can be injured in the slightest possible manner, or to anyone whose complexion (no matter in how bad condition it may be) will not be cleared, whitened, improved and beautified by the use of Derma-Royale.

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### GERMAN KALI WORKS EXHIBIT.

MONG the agricultural exhibits at the World's Fair one of the most interesting is that of the German Kali Works, in which the products of the great potash mines are displayed. These mines are located at Stassfurt, Germany, and furnish, as is well known, nearly the entire supply of potash, a valuable plant food and ingredient of every complete fertilizer. The potash coming from this source is found in large quantities in the form of solid masses of potash salts, most of which are subjected to a manufacturing process by which they are concentrated and made ready for use. The exhibit comprises a full collection of these minerals, which are highly interesting to the geologist and agricultural student.

portant part which this element plays in plant nutrition.

The pavilion in which the exhibit of the German Kali Works is contained is of great architectural beauty. It is the tallest structure of all agricultural exhibits and built in Renaissance style, richly decorated with allegorical figures, designed by Mr. Wm. Westphal, a well known sculptor of Berlin.

THE FRITILLARIAS.—With very few exceptions, says *British Gardening*, Fritillarias are easily cultivated. Most of the species may be grown in a mixed border. The Crown Imperials (F. imperialis and vars.) may also be utilized for shrubbery borders or for naturalization. The smaller kinds should have a place to themselves in a sunny border in a sheltered position.



# Who Killed Barbed Wire?

I, said Coiled Spring,
Woven up in a sling, I gave him a fling.
But I never kill—
Any other thing, nor even blood bring.
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There are many varieties of crude potash salts, differing in their chemical composition, among these carnallite and kainit are the most important. From these are manufactured the concentrated salts, such as muriate of potash, sulphate of potash and many other chemicals.

All these products are fully displayed at the exhibit, as well as photographs of the mines and maps showing and illustrating their location. Especially interesting to the agriculturist are various illustrations of experiments and graphic tables revealing in a striking manner the beneficial effect of potash upon crops and the im-

The more valuable and refractory of the smaller species may be planted out in cold frames. A deep sandy loam is the most suitable soil for all these species, and whatever position be assigned them they should be disturbed as little as possible, as they are very impatient of interference with their roots. They need not be lifted oftener than every three or four years, and they should then be replanted immediately in fresh soil. Autumn is the best time for this operation. The Crown Imperials should be planted at least four inches deep, as the stems throw out roots above the bulbs; half this depth will be sufficient for the smaller kinds.



## A BASKET PLANT.

HOSE who have once grown the fine-leaved musk plant, the Mimulus moschatus of the florists' catalogues, as a basket plant will rarely wish to grow it in any other way. Those that have never grown it in this way have little idea of its desirableness for this purpose. To see its delicate beauty in perfection it should be grown by itself. There seems to be no other plant that combines well with it for hanging baskets. It is so delicate and fairy-like that any other plant placed with it seems coarse. The Mimulus moschatus is an accommodating plant, though for the matter of that, to the true plant lover all plants are accommodating. It will droop, may rest on a trellis, or may be trained to climb on a cord. Those who have never seen it trained up the cords of a hanging basket may, perhaps, doubt its abilities in this line, but all it needs is a persistent placing, starting, or showing which way it is to go, and once fairly started it will need only an occasional reminder. It must be trained with a careful hand, for the sprays are delicate and break easily. The basket should be hung by cords if the plant is to climb; the wires and chains usually used are apt to heat in the sun and injure the plant by scorching the sprays of leaves. A basket filled with this dainty plant, part of which is allowed to droop over the sides and part to climb up the cords to a height of eighteen or twenty inches, is a beautiful object.

The leaves emit an odor of musk that is particularly strong upon the approach of a storm or during damp weather. The flowers are yellow, single, small and inconspicuous. A double flowered variety, that is very attractive, is now offered by the florists. The plant grows rapidly, requiring a light, rich soil, good drainage and plenty of moisture. It may be given a weak liquid fertilizer as often as once each week. The red spider seems to be its only enemy, but this rarely attacks it so long as the plant has an abundant supply of water; it seems to cover its leaves and stems with a faint moisture that serves to protect it. It should be sprinkled frequently with an atomizer as it will not bear dipping in water as will other plants. If the soil is kept moist the plant will bear plenty of sunshine. It is also useful for covering the surface of the soil in which oleanders and other large shrubs are grown, for which purpose it is much more beautiful than moss.

## POLLENIZING STRAWBERRIES.

The well known fruit-grower, J. H. Hale, has been making observations in regard to the distances at which pistillate varieties of strawberries will become pollenized by staminate sorts. The following are some of his remarks, which should command the attention of all strawberry growers:

"In fruiting something like a hundred varieties of strawberries the present season, and making daily notes regarding these and many others seen in other sections of the country, I have been particularly struck with the fact that there is a vast difference in the various pistillate varieties as to the necessity of their close contact with other perfect flowering kinds. Take, for instance, the two most noted new straw-berries now before the public, namely, the Swindle and Greenville, both enormously productive and late varieties, and both apparently without any well developed stamens in their flowers; I have found in every instance noted that while the Greenville fruited equally well, and had perfectly formed berries, whether one foot or twenty-five away from a perfect flowering variety, every additional foot that the Swindle was away from a perfect flowering variety

it dtraected at least ten per cent. from its fruiting qualities; and while the Swindle is evidently the most productive and latest of all productive strawberries it. will have to be planted in alternate rows with some perfect flowering variety if the best results are to be attained. On the other hand, with the Greenville it will not be necessary to plant perfect flowering varieties oftener than every fourth or fifth A similar difference between other pistillate varieties, and almost in the same order and degree, was noticed between the Putnam and Bubach, the Edgar Queen and Haviland, Middlefield and Warfield, Crescent and Windsor Chief.

I do not know that this matter has ever been brought to the attention of the horticultural public before. I accidentally noticed it a year ago, and so made very careful examinations the present year. In every instance I found the same results were obtained in the different sections of the country where I have noted them in fruit the present year. I had thought that local conditions might have to do with it, but so far it appears not, and I think it a matter well worthy the careful attention of every nurseryman who is, to any extent, engaged in the distribu-tion of strawberry plants; and that tests to determine these facts should be made with all new va-

## The Burgundy Rose.

In your last Magazine I see an inquiry for the Burgundy rose. Thinking this little old time plant may be nearly extinct and that some one might wish to have it, I write to tell you I have one which I have had all my life, MRS. T. K. CARTMELL.

Winchester, Va.

FITS.—All Fits stopped free by Dr. Kline's Great Nerve Restorer. No fits after the first day's use, Marvelous cures. Treatise and \$2.00 trial bottle free to Fit cases. Send to Dr. Kline, 931 Arch St., Phila, Pa.



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LEAVES AND THEIR FUNCTIONS.—This was the subject of one of Professor S. H. Vine's lectures recently in London, according to British Gardening. Taking the ordinary green foliage leaf as a type, he gave a brief review of its work, and the means by which it was accomplished; showing how, under the influence of sunlight, the leaf was able to change and combine the carbon it took from the air, and, with the water drawn up from the soil, to make a third substance from which it built up its tissues, carrying on a series of complex chemical changes which no chemist in his laboratory could imitate, by means of the chlorophyll or green coloring matter contained in its cells. This substance, though so abundant in nature, had hitherto defied all the efforts made to isolate it; all that was known for certain about it was that, dissolved in a solution of alcohol, it had the power to absorb certain light rays of the spectrum, and it was by virtue of that property, possessed by the living chlorophyll in the leaves, that plants were enabled to develop the energy necessary for their work.





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#### Calceolaria.

Will you tell me how to treat the calceolaria and how to destroy the insect pests that trouble it? MRS. C. E. R. Hayward, Wis.

The subject is too long to be treated summarily. The little work, "Practical Points," which we publish, price twenty-five cents, gives

the desired information in detail.

#### Pansies in a Box.

We are invited to give our experience if we have been especially successful with anything, and "that means me," for I have been so with pansies and sweet peas. I sent for a fifteen cent package of pansy seed and planted them early in March in a box five inches deep, eighteen inches wide and thirty inches long, filled with rich garden soil into which about a pint of hard wood ashes and the same of well rotted manure had been well mixed. I did not know what the young plants were like, so I just had patience and watched and waited, and I was well paid. After the plants were well set they began to wilt, so I determined to find the cause, and on lifting them, I found the roots had reached the bottom of the box and begun to mold, so I put them in a deeper box with soil mixed the same as the first and how they did grow until they began to bud! Then they wilted again. I had kept them well watered, I thought, and the soil loose, and again I determined to find out what was the matter. I lifted the plants again very, very carefully, lest some of the roots should be broken, and was surprised to find the tiny roots bedded in a hard ball of dirt. I laid the plants in a basin of rain water until the adhering soil was well soaked, and then, taking one plant at a time, I let the water fall gently on the roots until they were white and clean, and then replaced them and gave them a light watering with liquid manure, and put them on the north side of the house. And now I am being paid in pansies two inches across, and they are full of buds besides. I would say to any and all who love flowers-don't buy the plants, but try the seed, for it is very fascinating to watch them grow from babyhood, may I say, to the full bloom of youth. Their faces are al-Our little girl said when the first one most human. Our little girl said when the first one bloomed "Why mamma, they almost look at me, don't they?" I have already made this account of my first experience with pansies so long that I will leave the sweet peas for another time if any wishes to hear it. I kept the pansy seed in a south window until well up.

\*\*Pawnee City, Neb.\*\*

\*\*Real Proof of the pansion of the pansi

Our readers will notice the care with which our correspondent conducted all operations. was this care which insured success, and the want of it is at the bottom of most of the numerous failures of all kinds with plants which are reported. Let us hear about the sweet peas.

#### Raising Gloxinias from Leaves

Noticing a request in the June Magazine from I. H. P. for my method of raising plants from leaf I will try and give it. I select mature yet thrifty leaves from a plant at its best. If the stem is very short I place the leaf in a glass tumbler with about an inch of water in it; if the stem is longer I use a bottle filled with water, and keep the leaves in the sun as much as possible. When the bulb is formed and the little rootlets are from one-fourth of an inch to one inch in length, I plant in *light rich* soil and try and keep the plants growing all winter. Occasionally the new plant will appear before the old leaf dies down, but generally the leaf dies and the new plant does not come up for months. If the soil is heavy and wet the bulb will decay. I used to throw my bulbs away with the earth thinking that they never would grow because they were so long in coming up, but I have found that a small bulb will sometimes start into rapid growth and produce flowers after it has tried my patience for a whole year.

When I wrote you in the fall I had one hundred

plants in fine condition; later they began to droop somewhat, and I discovered the cause to be thrip. I read what was said about it by a correspondent in the October number of the Magazine, page 181. As it was about time for the plants to rest from their glorious efforts, I put them into their winter quarters in the pots as they were, those just started from leaves with the rest, and let all remain dry until about the first of March. Then I took all out of the earth and washed the bulbs thoroughly, as directed in the Magazine, to destroy thrips. I put all of the pots in boil ing soapsuds for the same purpose and used new soil to plant the bulbs in. I planted seventy sound bulbs but only twenty-five of them came up. All of my large old bulbs decayed except one, and all decayed except one of the new bulbs that came from leaves last year. I do not transplant my gloxinias every year for the reason that I do not have as good success to do so.

cess to do so.

I would like to ask a question. I have a splendid Farfugium grande that has been the envy of every one who saw it, but I have found that its leaves are turning brown on the under side, the same as the gloxinias did, and the magnifying glass shows that thrip is at work there also. The "heroic treatment" recommended by your correspondent cured the gloxinias, but I am afraid to try it on the farfugium. Is there any other way to dispose of the insects?

A. B. C.

THE BLACK KNOT OF PLUM TREES.—It is now an established fact that kerosene oil will destroy the black knot of the plum and cherry. Paint the affected parts thoroughly so as to saturate it with the oil. The growth of the fungus urate it with the oil. The growth of the fungus-will be stopped, and in time the diseased part will fall off. All plum trees should be exam-ined in July and August and the oil applied wherever there is a sign of the disease.



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#### Roses-Beans.

Will you tell me how to root rose bush slips? It is almost impossible to get a slip with a root.

How high do you allow rose bushes to grow hefore

you cut the top off? Or do you cut it at all?

Have you any pure white Moss roses?

Do you know of anything to put on the bush to kill the worms which will not hurt any person?

Is it best to cut the runners off butter beans or not? Orangeville, Ont. E. V. C. A.

For those who have few facilities for propagating plants by cuttings we advise the increase of roses to be made by layers. Bend down a shoot in such a manner that some of the new growth of the present season will reach to the ground. Make a narrow trench about four inches deep and into this bend the shoot so that it will lie at the bottom of the trench and the end bend upwards out of it. Remove any leaves which may be on that part of the shoot placed in the ground, and any between it and the stock, but allow the leaves to remain on the end which will protrude from the ground. At the point where the layer touches the ground make a slit in it, on the lower side, and about half way through, and work a little soil into it to keep it a little open; here the roots will form most readily. Prepare two or three pegs with a hook at the top to push down into the ground by the side of the layer, the hook catching on it and holding it close to the ground when pushed down. These pegs can be made from some small branches of trees. Usually two pegs will be sufficient for a layer. When securely fastened cover all over with soil, pressing or treading it firmly down. It will be best to leave the layers of roses until the autumn of the second year. The first spring after layering cut back the protruding shoot so that it will not be more than three or four inches in length.

The height roses are allowed to grow will depend on the vigor of the variety, but it is best to cut all strong-growing kinds down every spring within a foot to eighteen inches of the ground, and weaker growing kinds within six or eight inches.

White Bath is the best white Moss. There is no difficulty about keeping rose bushes free from insects if one will provide himself with the proper materials and appliances. A good garden syringe is very useful but not absolutely indipensable, for liquids can be applied to low oushes, like roses,

with a whisk broom. A soapsuds made with whale oil soap is very effective in destroying most insects infesting the rose. If necessary weak tobacco water may be employed.

Pure seed of butter beans should give no plants with runners. If raising for the green beans the runners can be left.

SHALL WE HAVE STATE BANK MONEY?-To repeal the ten per cent. tax upon State bank notes would mean that Maine, Kansas, California, North Dakota, Ohio, and all the other States would be in position to authorize local banking institutions to flood the country with paper money which could have no certainty of uniform safety and value. A Zimri Dwiggins might establish a chain of local banks on unsound principles and issue paper money which, mingled with the general volume of the country's currency, would be worthless in the hands of the last holders on the failure of the banks. It is now asserted in some quarters that Congress will refuse to repeal the harmful silver purchase act unless that repeal be accompanied by the resurrection of the still more pernicious system of "wildcat" paper money that was buried thirty years ago. Whatever may or may not be done with our currency laws, every business man, every farmer, every professional man who receives a salary, and every man or woman who earns wages or has a fixed money income, should insist absolutely upon a national, uniform currency, with the United States government at the back of every dollar in circulation. -From the "Progress of the World," July Review of Reviews.

THE EMPRESS AND THE GENERAL.-Although many flowers owe their names to famous people, there is only one instance known when a man and a flower received a title at the same moment. When Niel, a brave French general, was returning from the scene of his victories in the war between France and Austria he received from a peasant, who wished to honor the hero, a basket of beautiful pale yellow roses. One of the stems, which happened to have roots clinging to it, the general took to a florist in Paris, in whose care it remained until it became a thriving bush covered with blossoms. Niel then took the plant as a gift to the Empress Eugenie. She expressed a great admiration for the exquisite flowers, and on learning the rose was nameless, said significantly, "Then I will name it. It shall be the Marechal Niel," and at the same moment she bestowed upon the astonished general the jewelled baton that betokened his promotion to the high office of Marshal of France.



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All the Potatoes in competition must be delivered here before October 15th. The winners of the prizes will be announced in the November Magazine.

A GREAT MAGAZINE.—The Cosmopolitan Magazine has distanced all competitors in the matter of illustrations, being far in advance in this respect of all others. The reading matter is of high excellence and under the supervision of its able editor and assistant, John Brisbane Walker and Arthur Sherburne Hardy, its literary quality will be maintained and improved. The announcement in the July number that this splendid magazine would hereafter be supplied to its readers at 121/2 cents a number, or \$1.50 a year, has caused universal astonishment. It is the literary wonder of the age. There is no reason why it should not be received into every household.

THE BOOK OF THE FAIR.—A history and full account of the great Chicago Fair is being written by Hubert H. Bancroft, and published by the Bancroft Company of Chicago and San Fran-The work is in large quarto sizes, and will contain over 3000 of the finest illustrations, many of them full page plates. The work will consist of 1000 Imperial folio pages, 12 x 16 ininches, to be issued in 25 parts of 40 pages each, at the rate of about two parts monthly, and at the price of \$1.00 a part. The first part has been issued and is of high artistic beauty. It will be an admirable history of the Fair and of lasting value.



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FLOWERS SOWN BY NATURE.

R. BURROUGHS says that perfume is to a flower what genius is to a man at least Mr. Burroughs expressed that happy thought, not in the above words but in his own peculiarly felicitous language which should always be quoted verbatim. Anyhow what he said is true; and after reading articles from his pen and from others one suspects there is more "genius" abroad in Northern air than is to be inhaled in this section, notwithstanding the luxuriance of our flora.

But if we have not the famous arbutus, our woodland hills are carpeted in spring-time with the wild heart'sease (Viola pedata) which has very breath of spring herself, and the prairies are deliciously sweet with the little South Wind Flower (Allium striatum) which pours its richest libations when Shawondasee stoops to its creamy chalices.

Later comes the Shooting Star and the Sensitive Plant (Mimosa strigillosa), which latter I have seen covering rods of ground and holding up hundreds of deep pink, gold dotted, rose scented spheres of bloom. For the mimosa, though a pea, is intensely rose scented herethere is no monopoly in fragrance nor in genius. And how like that of the grape blossom is the smell of the spider-worts; just the same Juney deep "warm ravishment." The little spiderworts whose slender scapes bear each but a single flower are the loveliest of them all, but I can't find them in my Gray. I've seen them gemming many a yard with royal purple, Imperial blue and czarish crimson,

But what have I found to set against the ar-utus, the azalea, the clethra? We have the butus, the azalea, the clethra? We have the garland crab apple, and many a blossom which like the one poem people has "genius" enough to give you at least one inspiring sniff, but on the whole, I believe the Southwest has been slighted as to sweetness.

In light—I mean color—we defy competition. Wordsworth's daffodils were nothing compared with acres of golden coreopsis, or cone flowers, "tossing their heads in sprightly dance," or with sheets of scarlet castilleia, "prairie fire" we called it when we first saw it. I was near forgetting the wild phloxes and verbenas-they are sweet enough to rank as pretty high gen-

The flowers sown by Nature herself grow with such incomparable grace, such an eternal fitness of environment that one is almost discouraged with one's own efforts in floriculture; but the tame flowers have a thousand charms of association. My flower garden, in fact, is an association. My flower garden, in fact, is an autograph album, and it is sweet to read a dear name writ in flowers. "Vick" of course is "writ large" in blazing phlox, verbenas, and what not? Flower loving friends far and near, from Dakota down, have inscribed themselves in my little yard, and if in any case I have failed to bring out the characters vividly it is the moles' fault, not mine. How can I keep moles away?

In the June number of the Magazine a lady asks for the name of a shrub which from the description she gave must be Corchorus, Kerria Japonica, a member of the rose family. It grew in my grandmother's garden in old Kentucky; I have never seen it elsewhere. E. W. B.

Carthage, Mo.



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